



This slide set “Hand Hygiene in Healthcare Settings-Supplemental” provides:

- 1) Slides that may be used in conjunction with the “Hand Hygiene in Healthcare Settings-Core” slide set.
- 2) Question and answer slides to be used in an interactive presentation.
- 3) Slides containing information on topics related to hand hygiene (e.g., antimicrobial resistance).
- 4) Slides that you can customize by inserting data specific to your hospital.

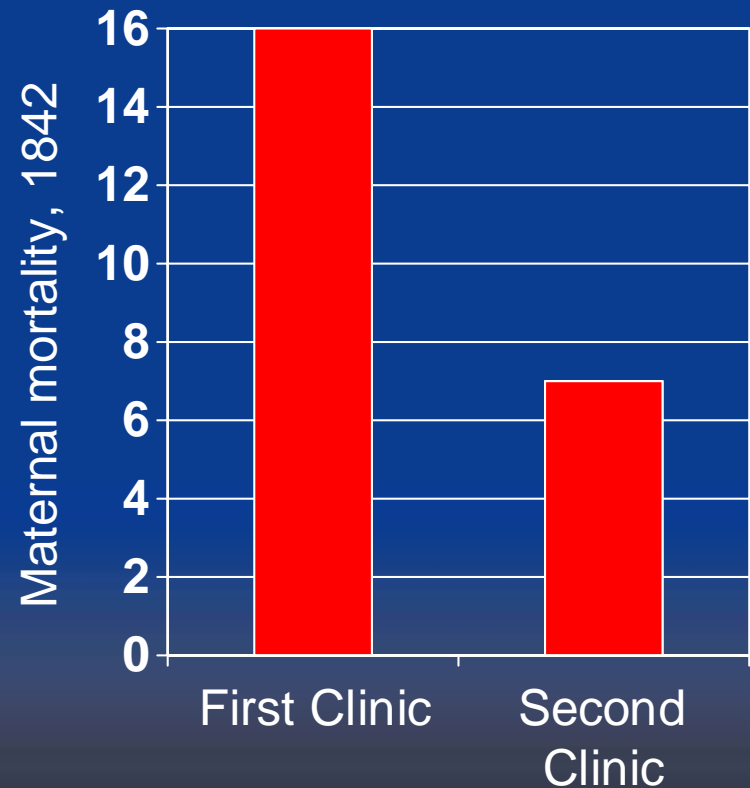
The Hand Hygiene in Healthcare Settings-Supplemental slide set was developed in conjunction with the Chicago Antimicrobial Resistance Project [[www.carp-net.org](http://www.carp-net.org)].

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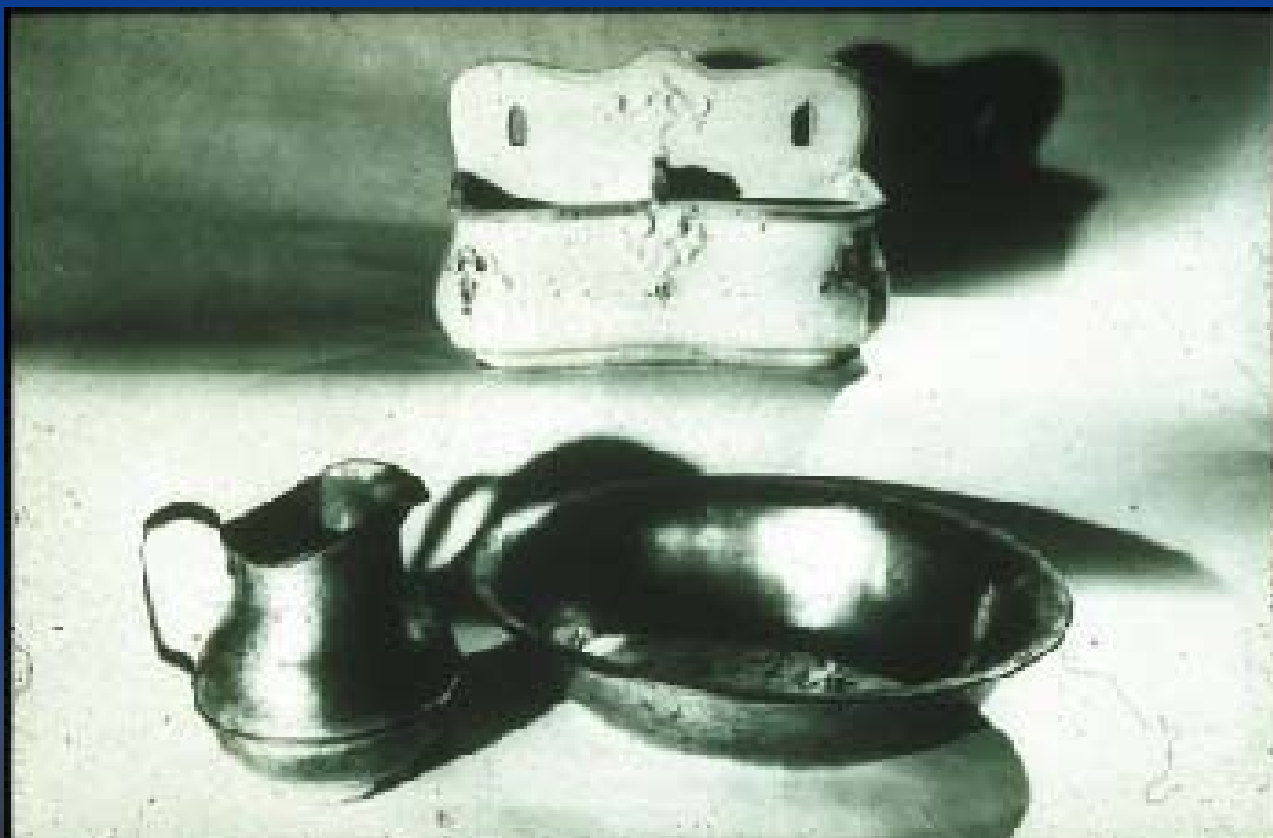
# Ignaz Semmelweis, 1815-1865

- 1840's: General Hospital of Vienna
- Divided into two clinics, alternating admissions every 24 hours:
  - First Clinic: Doctors and medical students
  - Second Clinic: Midwives



# The Intervention:

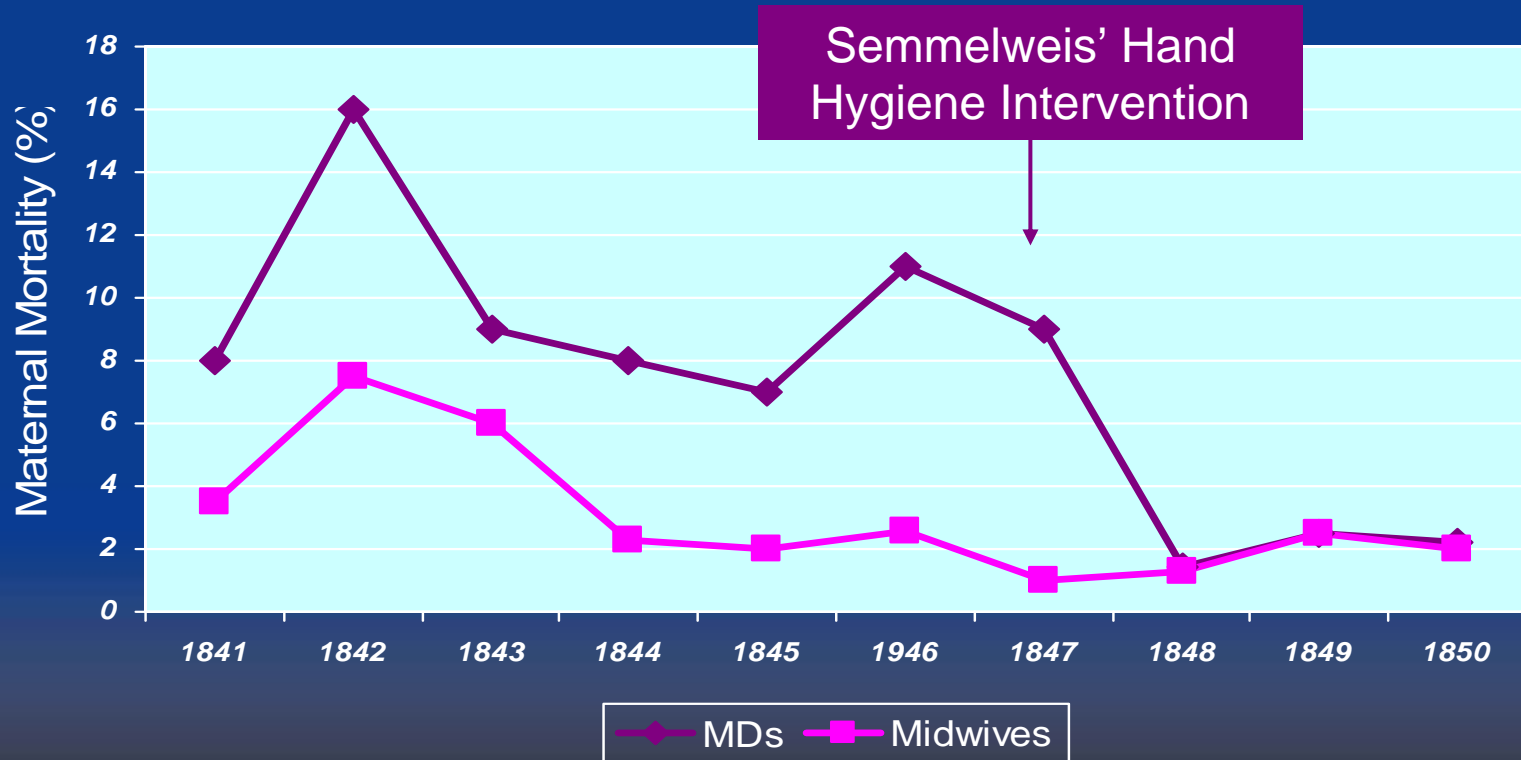
## Hand scrub with chlorinated lime solution



Hand hygiene basin at the Lying-In Women's Hospital in Vienna, 1847.

# Hand Hygiene: Not a New Concept

## Maternal Mortality due to Postpartum Infection General Hospital, Vienna, Austria, 1841-1850



~ Hand antisepsis reduces the frequency of patient infections ~

Adapted from: *Hosp Epidemiol Infect Control*, 2<sup>nd</sup> Edition, 1999.

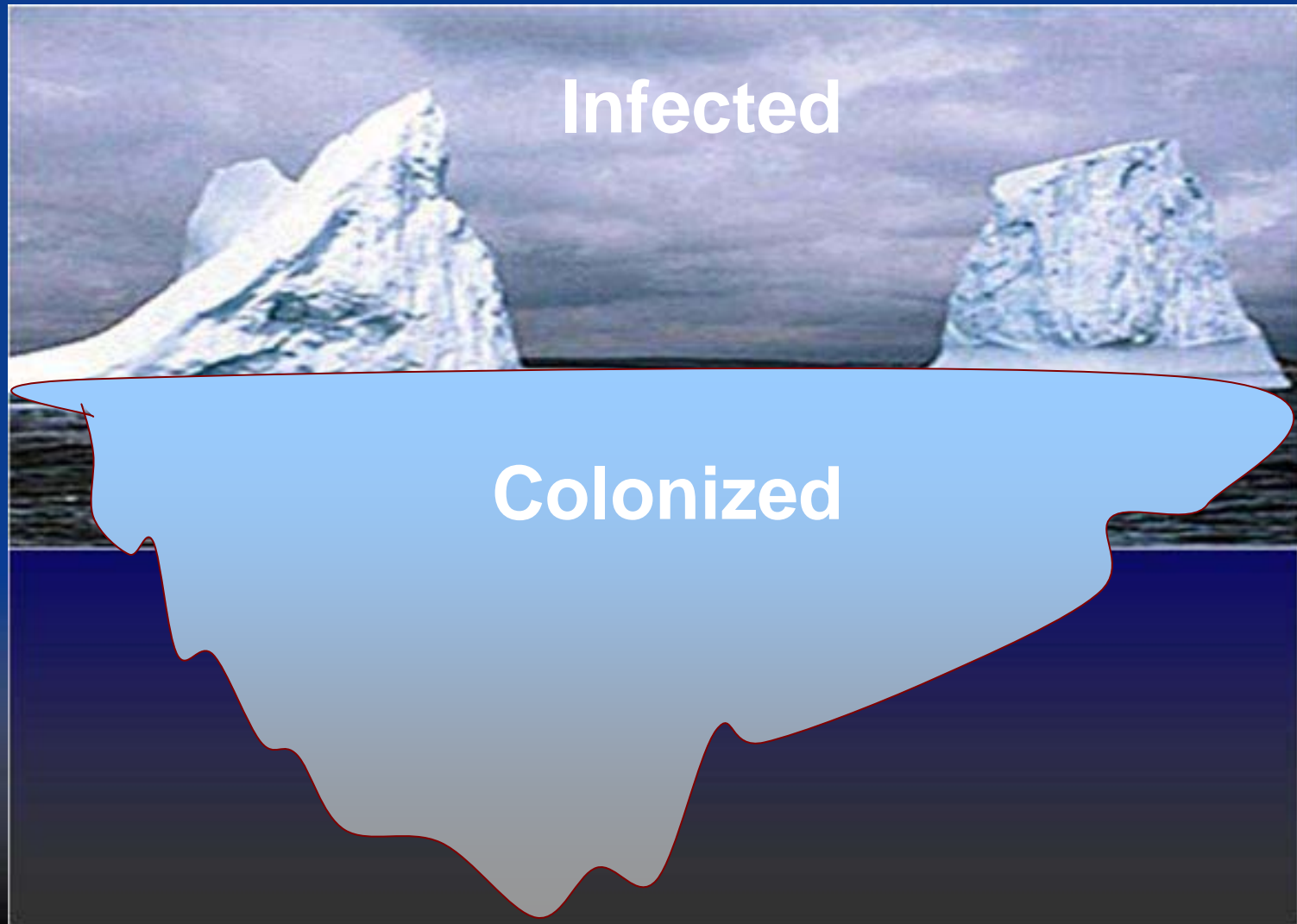


# Colonized or Infected: What is the Difference?

- People who carry bacteria without evidence of infection (fever, increased white blood cell count) are colonized
  - If an infection develops, it is usually from bacteria that colonize patients
  - Bacteria that colonize patients can be transmitted from one patient to another by the hands of healthcare workers
- ~ **Bacteria can be transmitted even if the patient is not infected** ~



# The Iceberg Effect





# Recovery of VRE from Hands and Environmental Surfaces



- Up to 41% of healthcare worker's hands sampled (after patient care and before hand hygiene) were positive for VRE<sup>1</sup>
- VRE were recovered from a number of environmental surfaces in patient rooms
- VRE survived on a countertop for up to 7 days<sup>2</sup>

<sup>1</sup> Hayden MK, *Clin Infect Diseases* 2000;31:1058-1065.

<sup>2</sup> Noskin G, *Infect Control and Hosp Epidemi* 1995;16:577-581.



# ***The Inanimate Environment Can Facilitate Transmission***

**X** represents VRE culture positive sites



**~ Contaminated surfaces increase cross-transmission ~**

Abstract: The Risk of Hand and Glove Contamination after Contact with a VRE (+) Patient Environment. Hayden M, ICAAC, 2001, Chicago, IL.





# What is the single most important reason for healthcare workers to practice good hand hygiene?

1. To remove visible soiling from hands
2. To prevent transfer of bacteria from the home to the hospital
3. To prevent transfer of bacteria from the hospital to the home
4. To prevent infections that patients acquire in the hospital

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How often do you clean your hands after touching a PATIENT'S INTACT SKIN (for example, when measuring a pulse or blood pressure)?

1. Always
2. Often
3. Sometimes
4. Never



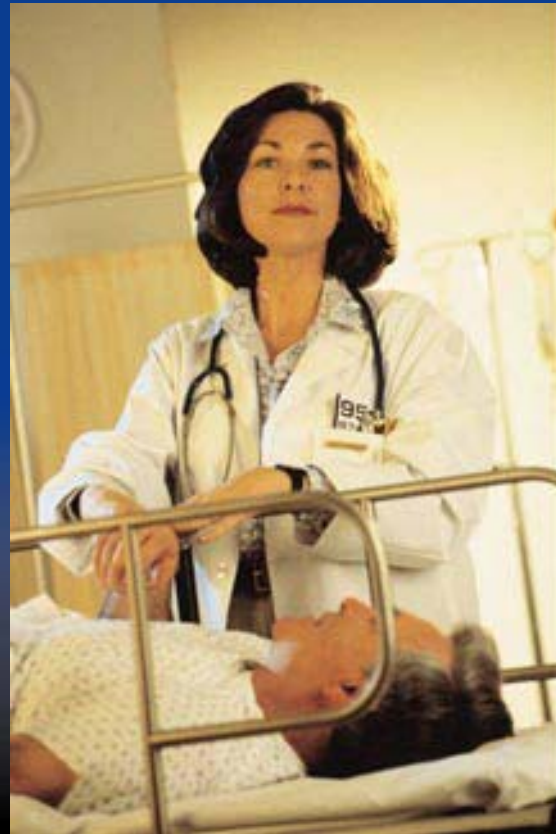
How often do you clean your hands after touching a PATIENT'S INTACT SKIN (for example, when measuring a pulse or blood pressure)?

1. Always
2. Often
3. Sometimes
4. Never



Estimate how often YOU clean  
your hands after touching a  
patient or a contaminated  
surface in the hospital?

1. 25%
2. 50%
3. 75%
4. 90%
5. 100%



Now, estimate how often *YOUR CO-WORKERS* clean their hands after touching a patient or a contaminated surface in the hospital?

1. 25%
2. 50%
3. 75%
4. 90%
5. 100%



# Which method do you use to clean your hands at work?

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub







# Which hand hygiene method is best at killing bacteria?

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub



# Which hand hygiene method is best at killing bacteria?

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub



Which of the following hand hygiene agents is LEAST drying to your skin?

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub



Which of the following hand hygiene agents is LEAST drying to your skin?

1. Plain soap and water
2. Antimicrobial soap and water
3. Alcohol-based handrub

It is acceptable for healthcare workers to supply their own lotions to relieve dryness of hands in the hospital.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



It is acceptable for healthcare workers to supply their own lotions to relieve dryness of hands in the hospital.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



How much time would an ICU nurse save during an 8 hour shift by using an alcohol-based handrub instead of soap and water?

1. 15 minutes
2. 30 minutes
3. 1 hour
4. 2.5 hours





How much time would an ICU nurse save during an 8 hour shift by using an alcohol-based handrub instead of soap and water?

1. 15 minutes
2. 30 minutes
3. 1 hour
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\* Based on 12 opportunities/hour, handwashing time=60 seconds, alcohol-based handrub time=20 seconds



Healthcare-associated organisms are commonly resistant to alcohol.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



Healthcare-associated organisms are commonly resistant to alcohol.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree

When a healthcare worker touches a patient who is COLONIZED, but not infected with resistant organisms (e.g., MRSA or VRE) the HCW's hands are a source for spreading resistant organisms to other patients.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



When a healthcare worker touches a patient who is COLONIZED, but not infected with resistant organisms (e.g., MRSA or VRE) the HCW's hands are a source for spreading resistant organisms to other patients.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



**A co-worker who examines a patient with VRE, then borrows my pen without cleaning his/her hands is likely to contaminate my pen with VRE.**

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



A co-worker who examines a patient with VRE, then borrows my pen without cleaning his/her hands is likely to contaminate my pen with VRE.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree





How often do you clean your hands after touching an ENVIRONMENTAL SURFACE near a patient (for example, a countertop or bedrail)?

1. Always
2. Often
3. Sometimes
4. Never



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1. Always
2. Often
3. Sometimes
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# Use of artificial nails by healthcare workers poses no risk to patients.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree

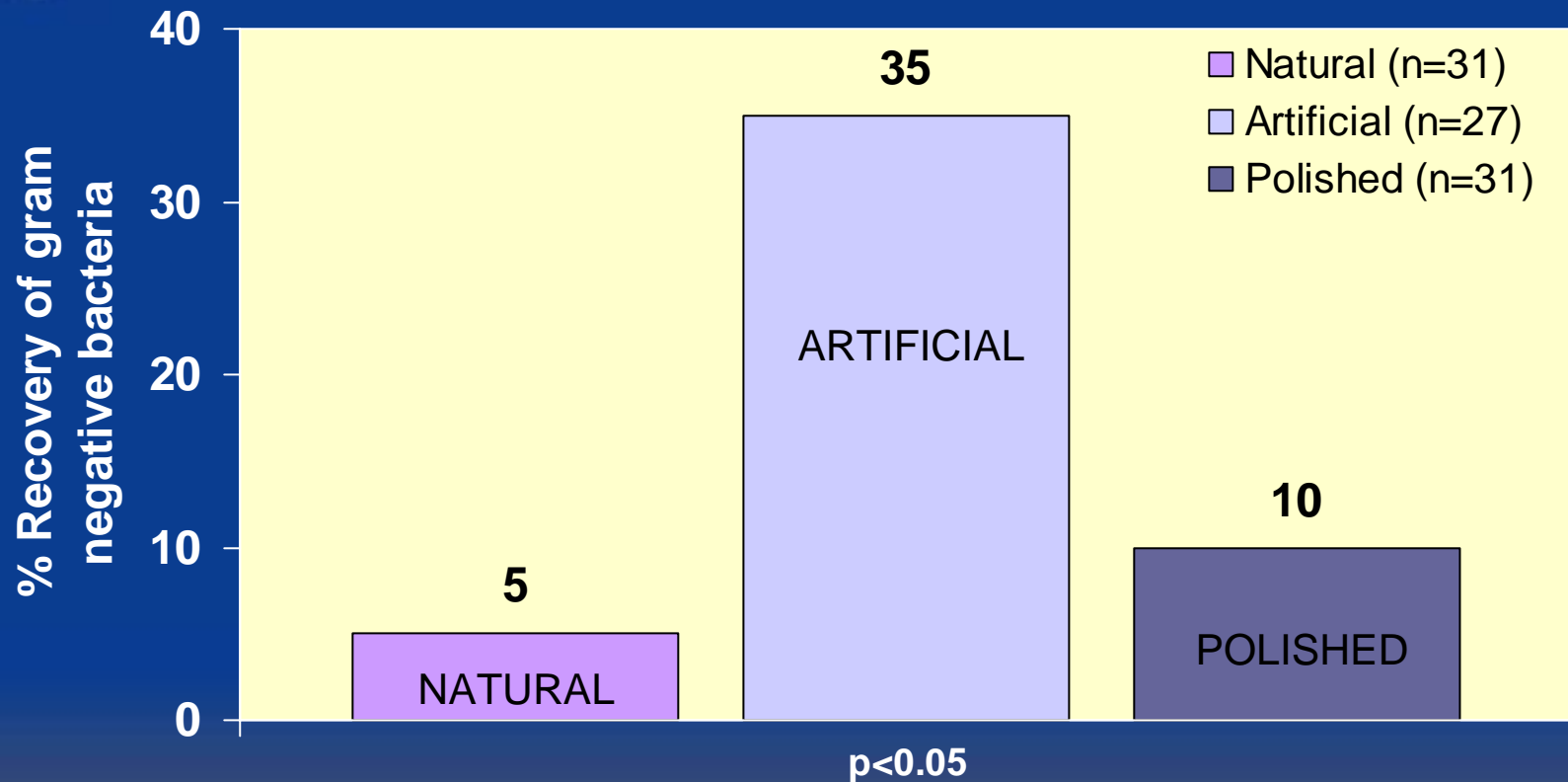


# Use of artificial nails by healthcare workers poses no risk to patients.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



# Can a Fashion Statement Harm the Patient?



Avoid wearing artificial nails, keep natural nails <1/4 inch if caring for high risk patients (ICU, OR)

Glove use for all patient care contacts is a useful strategy for reducing risk of transmission of organisms.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree



Glove use for all patient care contacts is a useful strategy for reducing risk of transmission of organisms.

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree





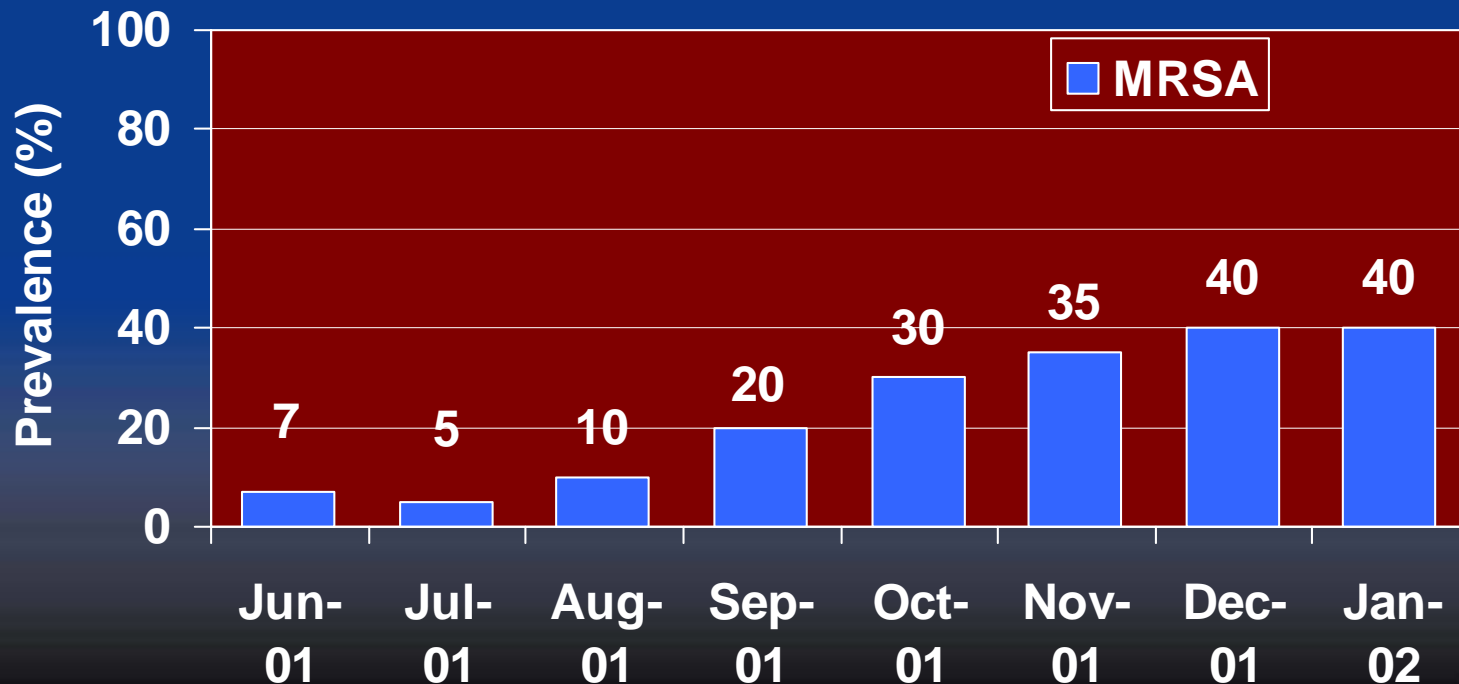
At your hospital, what percentage of [insert organism name] isolates are resistant to [insert drug name]?

1. <5%
2. 15%
3. 20%
4. 30%
5. >50%



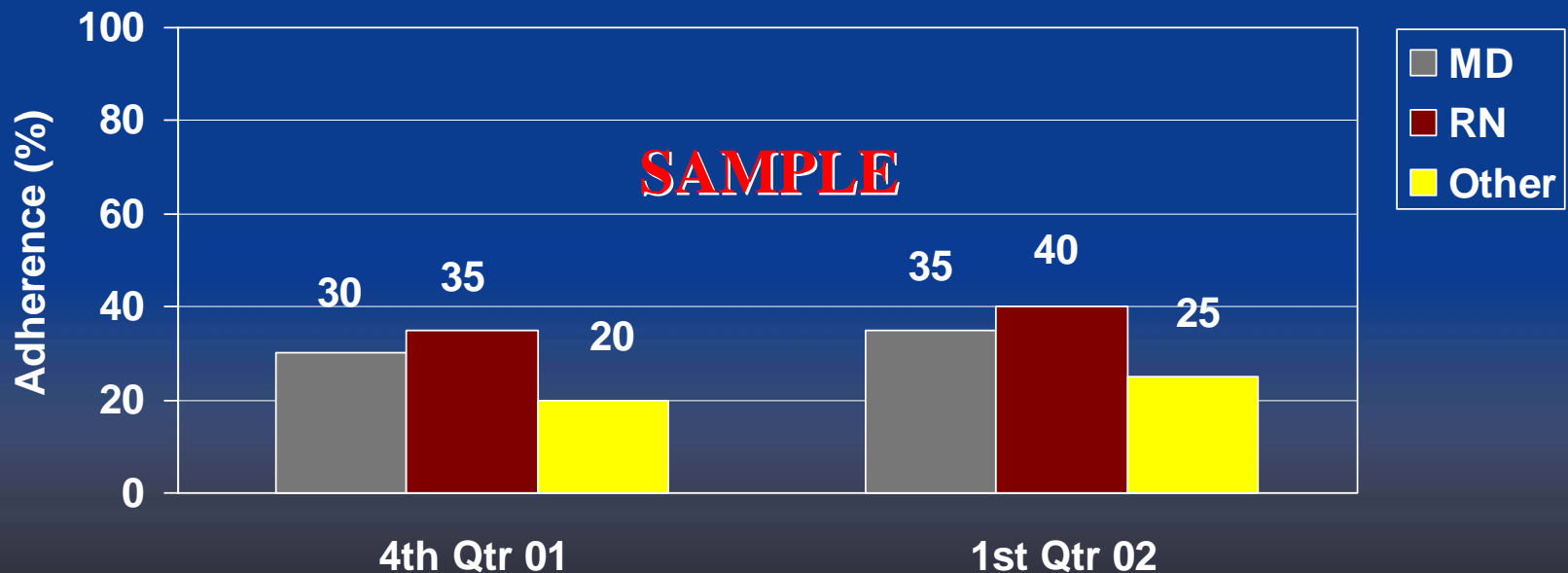
*Insert graph showing annual, monthly, or quarterly trend in antimicrobial (e.g. MRSA) prevalence, or number of isolates at Hospital X below*

Prevalence of MRSA at Hospital X



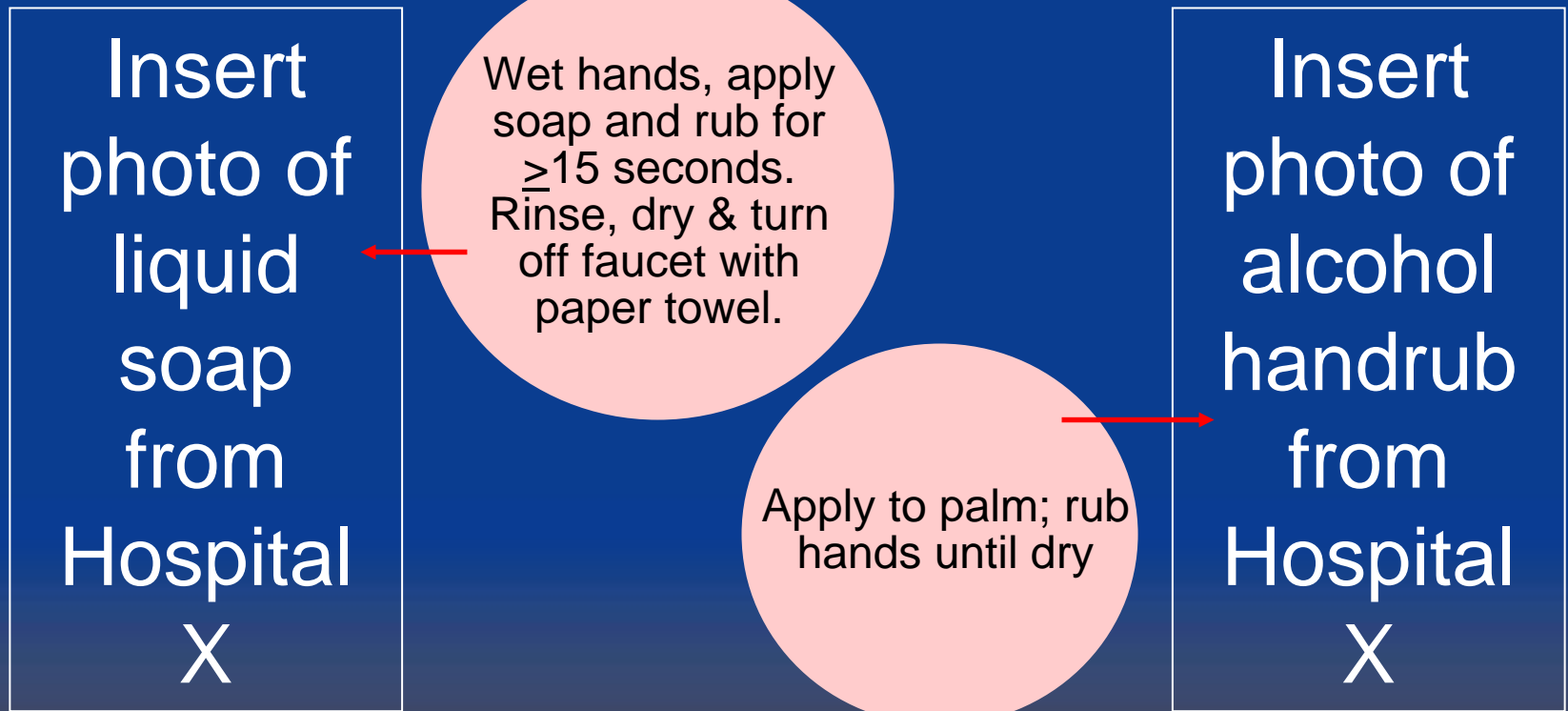
# Insert facility-specific data on HCW hand hygiene adherence below

HCW Hand Hygiene Adherence at Hospital X





# *Hand Hygiene Options at Hospital X*



~ Use soap and water for visibly soiled hands ~

~ Do not wash off alcohol handrub ~



# What is the Story on Moisturizers and Lotions?

**ONLY USE facility-approved and supplied lotions**

Because:

- Some lotions may make medicated soaps less effective
- Some lotions cause breakdown of latex gloves
- Lotions can become contaminated with bacteria if dispensers are refilled

Insert  
photo of  
lotion  
from  
Hospital  
X

*~ Do not refill lotion bottles ~*



# hand hygiene saves lives

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION  
SAFER • HEALTHIER • PEOPLE™

**SAFER • HEALTHIER • PEOPLE™**